

**REMARKS**

Applicant expresses appreciation to the Examiner for consideration of the subject patent application. Claims 1-20 were originally presented. Claims 1-20 remain in the application. The indication of allowable claims 10-20, and the indication of allowable subject matter in claims 7-9, if rewritten in independent form, is acknowledged with appreciation.

By this amendment, claim 1 has been amended. No new subject matter has been added.

The claims and specification have been amended to address the concerns raised by the Examiner. The following remarks address each and every basis of objection and rejection presented in the pending Office Action.

**Information Disclosure Statement**

As requested by the Examiner, attached hereto is a copy of the PTO form 1449 that was submitted with the present application as originally filed.

**Specification Objections**

As requested by the Examiner, attached hereto is a copy of page 6 (the last page) of the specification as originally filed in the present application. The Applicant presumes that the Examiner has a true and correct copy of the remainder of the present application, that is, the claims and abstract.

The Applicant has amended the first paragraph on page 3 of the specification to correct the number of the referenced patent, and to clarify the reference to that patent. No new matter has been added.

**Claim Rejections - 35 U.S.C. § 102**

In the pending Office Action, claims 1 and 6 were rejected under 35 U.S.C. 102(b) as being anticipated by Vogeley et al. As the Examiner is aware, "[a] claim is anticipated only

if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Verdegaal Bros. V. Union Oil Co. of California, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). The Applicant respectfully submits that all elements of the claimed invention are not expressly or inherently taught by the Vogeley reference.

First, Vogeley does not disclose an image transistor as claimed by the Applicant. The Applicant’s claim 1 claims “an image transistor, having a liquid crystal modulator, *configured to amplify a light signal* using amplification energy from a light source.” (Claim 1, emphasis added) The Vogeley reference does not disclose a device that amplifies a light signal. Vogeley does not include both a light signal and a light source. Instead, the Vogeley device merely interposes an LCD display in a light stream. The light stream itself is not a light signal. Moreover, there is no light signal that is amplified. The appearance of the LCD display is merely projected by the light. There is no amplification of a light signal. Consequently, the Vogeley reference does not anticipate the invention of claim 1.

Additionally, the Applicant has amended claim 1 to specify that the “coolant passageway . . . [is] configured to receive a flow of optically neutral coolant therethrough.” This amendment is supported by the language of the Applicant’s specification which states that the coolant flow “can sufficiently cool the liquid crystal material of the modulator 12, *without altering the optical properties of the image* or degrading the performance of the device.” (P. 4, ln. 19-21, emphasis added). This language indicates that the coolant flow is optically neutral.

The Applicant respectfully submits that this element is not present in Vogeley, either expressly or inherently. The element of optical neutrality is neither taught nor suggested by Vogeley. Indeed, there is no discussion of this issue, and the subject matter of Vogeley does not require that the coolant be optically neutral.

Since Vogeley does not disclose this element or its equivalent, Vogeley does not contain each and every element of claims 1 and 6, and therefore fails to anticipate those claims. The Applicant thus respectfully requests that this rejection be withdrawn.

**Claim Rejections - 35 U.S.C. § 103**

Claims 2-5 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vogeley et al. The Applicant respectfully submits that claims 2-5 are allowable as being dependent upon an allowable base claim, for the reasons given above, and respectfully requests that this rejection be withdrawn.

Additionally, as stated in M.P.E.P § 706.02(j), to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

In view of these principles, the Applicant respectfully submits that the Examiner has failed to make a prima facie case of obviousness. There is no teaching or suggestion in Vogeley that would lead one of skill in the art to produce the Applicant's invention. First, Vogeley does not teach or suggest an image transistor. Additionally, Vogeley does not consider the issue of optical neutrality. Consequently, there is no suggestion or motivation, in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to obtain the disclosed invention.

With respect to claim 5 in particular, the term "laminar flow" or comparable language is not found in the Vogeley reference. Indeed, the issue of laminar flow versus turbulent flow is not discussed or even hinted at, indicating that it is an issue that the invention of Vogeley does not consider in any way, and is an issue that is not important to that invention. Consequently, there is no suggestion or motivation, in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference because there is nothing in the reference that suggests that laminar versus turbulent flow is an issue. However, the issue of laminar versus turbulent flow is one of the issues that the present invention specifically addresses, and which is claimed in claim 5.

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For all of the above reasons, the Applicant respectfully submits that claims 2-4 are in condition for allowance over the cited reference, and respectfully requests that this rejection be withdrawn.

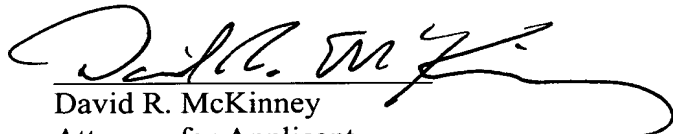
**CONCLUSION**

In view of the foregoing, the Applicant respectfully requests that the Examiner withdraw the rejections and allow claims 1-20 to pass to issuance. If any issues arise that could be resolved during a telephone interview, the Examiner is invited to telephone the undersigned attorney, or Vaughn W. North at (801) 566-6633, so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025

Dated this 16<sup>th</sup> day of June, 2004.

Respectfully submitted,



David R. McKinney  
Attorney for Applicant  
Registration No. 42,868

THORPE NORTH & WESTERN, LLP  
8180 South 700 East, Suite 200  
Sandy, Utah 84070  
(801) 566-6633

On behalf of:

HEWLETT-PACKARD COMPANY